

IN THE CLAIMS:

Please amend the claims as follows.

1. (Currently Amended) A hammer drill for boring through ~~providing~~using rotational forces and percussive forces to a drill bit, comprising:
  - a motor;
  - a connector shaft driven rotationally by said motor;
  - a spindle capable of holding said drill bit, wherein the rotational force through said connector shaft is propagated;
  - a motion converter mechanism for converting the rotational force of the said connector shaft to a reciprocating force in the axial direction in said spindle;
  - a percussive member for applying a percussive force in the axial direction to the drill bit held in said spindle based on the reciprocating force converted by said motion converter mechanism, and
  - a percussive force converter mechanism, disposed between said motor and said connector shaft, for converting percussive forces from of said percussive member through by changing the rotational speed ratio of said motor and said connector shaft.
2. (Currently Amended) A hammer drill according to claim 1, wherein said percussive force conversion means converter mechanism is a transmission mechanism ~~disposed between said motor and said connector shaft~~, where, in said transmission mechanism, one or multiple a plurality of gears with mutually differing numbers of gear teeth, which receive the rotational force from said motor in order to rotate, and which can move freely in the axial direction of said connector shaft, are is selectively meshed, by the force off[[f]] a spring, to gear teeth equipped on said connector shaft side.
3. (Currently Amended) A hammer drill according to claim 2, wherein the mating teeth of the

gear that mates with the gear teeth of said connector shaft side are provided with sidewalls on one side in the axial direction thereof.

4. (Original) A hammer drill according to claim 2, wherein either the gear teeth on said connector shaft side, or the mating teeth of said gear that meshes with said gear teeth, have different axial-direction lengths on alternating teeth.

5. (Original) A hammer drill according to claim 2, wherein either the gear teeth on said connector shaft side, or the mating teeth of said gear that meshes with said gear teeth, are provided every other tooth.

6. (Original) A hammer drill according to claim 2, wherein a sleeve is affixed to said connector shaft, where said sleeve is equipped with a spring that provides a force on said gear.

7. (Currently Amended) A hammer drill according to claim 2, wherein said transmission mechanism is provided with a shifting shaft between a pair of gears, wherein, when said shifting shaft is moved in the axial direction of said connector shaft to remove one gear, against the force of the spring, away from the gear teeth of said connector shaft side, the other gear is moved by the force of a spring to a position wherein ~~it~~ the other gear meshes with the gear teeth on the connector shaft side.

8. (Currently Amended) A hammer drill according to claim 7, wherein said shifting shaft is ~~equipped disposed~~ in a position that is off-center relative to the center of rotation of a shifting switch on the axis of said connector shaft.

9. (Currently Amended) A hammer drill according to claim 7, wherein said pair of gears is equipped with a specific gap in the axial direction of said connector shaft, and a space for obtaining a neutral state, ~~wherein in which~~ neither gear [[of]] meshes with the gear teeth on said connector shaft side[[,]] is formed between said pair of gears.

10. (Original) A hammer drill according to claim 9, wherein the equilibrium positions of the

springs that provide forces onto each of the gears of said pair of gears is in the position of said neutral state.

11. (New) A hammer drill comprising:

a motor;

a connector shaft driven rotationally by said motor;

a transmission mechanism disposed between said motor and said connector shaft, configured to change a rotational speed ratio between said motor and said connector shaft;

a spindle having a chuck to hold a drill bit, configured to rotate by a rotational force through said connector shaft;

a motion converter mechanism configured to convert the rotational force of the said connector shaft to a reciprocating force in the axial direction of said spindle; and

a percussive member configured to reciprocate in the axial direction of said spindle based on the reciprocating force converted by said motion converter mechanism, wherein said spindle is percussed by the percussive member, while rotating based on the rotational force through said connector shaft.

12. (New) A hammer drill according to claim 11, wherein said transmission mechanism

comprises:

a pinion, having a plurality of gear portions in different diameters, provided on an axle of said motor;

gear teeth provided around said connector shaft;

a plurality of gears meshing with the plurality of gear portions of said pinion respectively, configured to reciprocate along said connector shaft,

wherein one of said plurality of gears selectively meshes with said gear teeth of said

connector shaft.

13. (New) A hammer drill according to claim 12, wherein each of said plurality of gears comprises inner gear teeth to be selectively meshed with said gear teeth of said connector shaft.
14. (New) A hammer drill according to claim 12, wherein said plurality of gears are configured to concentrically rotate on said connector shaft.
15. (New) A hammer drill according to claim 14, wherein each of said plurality of gears is disposed at an interval in the axial direction of said connector shaft.
16. (New) A hammer drill according to claim 15, wherein a gap for a neutral state that neither of said multiple gears meshes with said gear teeth of said connector shaft is formed between said plurality of gears.
17. (New) A hammer drill according to claim 12, further comprising a spring disposed around said connector shaft for biasing said plurality of gears.
18. (New) A hammer drill according to claim 12, further comprising a shifting switch operatively connected to said connector shaft, wherein one of said plurality of gears selectively meshes with said gear teeth of said connector shaft by operation of said shifting switch.